

ON TWO UNDESCRIBED EXUDATIONS FROM THE
LEGUMINOSÆ.

BY J. H. MAIDEN, F.L.S., &c.

I. A kino from the "Native Wistaria," *Milletia* (*Wistaria*) *megasperma*, F.v.M.

This "vine" runs to an enormous length up and down trees and along the ground. Bushmen appear to know in a general way of the existence of an exudation from it, but I can find no reference to any exudation whatever from this or any other *Milletia* or *Wistaria* in any part of the world. Not only are the stems of the "Native Wistaria" of great length, but they are also of great thickness, so that a large quantity of the exudation could be obtained, if required, as it flows freely. The pods also occasionally show small globules of kino.

This exudation is a beautiful ruby-coloured transparent substance; it breaks readily with a clear conchoidal fracture, and is powerfully astringent. It forms a rose-tinted solution in water, and is soluble in cold alcohol.

It consists of a tannin and water; no other substance can be found in it. I cannot detect any difference in behaviour between this tannin and that of kinos belonging to the Ruby group. I have in this instance taken the opportunity of noting the tannin in its value as given by Löwenthal's method (as an equivalent of gallic acid), but have, in addition, stated the quantity as an absolute gravimetric percentage.

Its composition may thus be stated:—

Tannic acid	...	...	...	78·2
Ash	...	...	...	·8
Moisture	...	...	...	20·1
Insoluble impurities	...	...	...	·9
				100·0

By Löwenthal's process it gives 56·0 per cent. of tannic acid (as gallo-tannic acid equivalent). It is, in fact, a Ruby kino, the only apparent difference being that the kino of *Millettia megasperma* is not so readily soluble in hot water as the Ruby kinos of Eucalypts.

The occurrence of a kino in the Leguminosæ has not before been recorded from Australia; it is, however, not new in other parts of the world. Thus, the official kino is yielded by *Pterocarpus marsupium* of India and *P. erinaceus* of West Africa; the astringent exudation of *Butea frondosa* is well known, and similar substances are recorded from *Erythrina indica* and other leguminous plants.

It is of some scientific interest, but of no commercial importance; for the kino of *Millettia megasperma* could never compete with the practically identical and very abundant Ruby kinos of the Eucalypts.

2. A gum from "The Barrister" (*Mezoneurum scortechinii*, F.v.M.).

The collector of this gum naïvely reported—"The people here call this plant 'The Barrister' because its spines are hard to get away from." The term "Lawyer" is common in this and other countries as applied to plants with prickly stems; the mention, under the circumstances, of the name of a particular branch of the legal profession is new to me. The genus consists of climbing plants, and is chiefly confined to Africa. I am not aware that a gum has been recorded from any species hitherto.

M. scortechinii yields a horny gelatinous-looking gum reminding one of that of *Acacia decurrens* as far as external appearance is concerned. It only slightly dissolves in cold water, but swells up in that liquid to several times its original bulk. It does not dissolve in boiling water within a reasonable period. It does not dissolve in either potash or soda, but turns a canary-yellow colour in those liquids, the colour fading on cooling.

It dissolves in dilute hydrochloric acid, and a precipitate is formed when an alkali is added in excess. When Barium hydrate

is added to the acid solution, a precipitate is formed, as in the case of tragacanth.

From the above and other tests it was found that the gum possesses properties very similar to those of tragacanth. At the same time, the quantity of gum at my disposal is so very small that I have been unable to make practical tests of its value as a substitute for that well-known gum. It is proper to state that the gum of *Mezoneurum scortechinii* (or even of its allied species *brachycarpum*) can never be sufficiently abundant to form an article of commerce. It may be mentioned that tragacanth is also the product of a leguminous genus (*Astragalus*), which is not, however, closely related to *Mezoneurum*.

The composition of this sample of Barrister Gum may be stated as follows :—

Soluble in cold water*	...	...	16·5
Soluble in acids ; insoluble in alkalies*	68·57		
Moisture	...	...	10·95
Ash	...	...	3·98
			100·00

Both the kino and the gum were collected in the Richmond River district by Mr. W. Bäuerlen, Botanical Collector to the Technological Museum, and I have been helped in the examination of them by my laboratory-assistant, Mr. H. G. Smith.

* This gum appears to contain neither Arabin nor Metarabin. The soluble and insoluble constituents of tragacanth and some tragacanthoid gums are discussed in a paper by the author—"Sterculia Gum : its Similarities and Dissimilarities to Tragacanth" (*Pharm. Journ.* [3], xx., 381)—to which the reader is referred.